

# ABSTRACT OF THE DISCLOSURE

A prosthetic implant for replacing a nucleus pulposus of an intervertebral disk includes upper and lower endwalls of discoid cross-section, each having an antero-posterior diameter less than its transverse diameter, and an hourglass-shaped sidewall connecting the peripheries of the upper endwall and lower endwall to enclose an interior volume filled with a substantially incompressible liquid or soft plastic material. A total prosthesis for replacing the entire human intervertebral disk has an annular core made of a first biocompatible polymer surrounding a central cavity, transitional plates affixed respectively to the upper and lower surfaces of the annular core, the upper and lower transitional plates being made of a second biocompatible material having an elastic modulus greater than that of the first biocompatible polymer, and upper and lower endplates adapted to contact adjacent vertebrae and affixed respectively to the upper and lower transitional plates.